

ENVIRONMENTAL PROTECTION LAND USE MANAGEMENT

Notice of Opportunity for Public Comment on Certain Topics Related to the Ground Water Quality Standards

Take notice that the Department of Environmental Protection is seeking public comment on certain topics related to the Ground Water Quality Standards, including regulatory changes that would help redirect development away from areas where natural resources that are vital to the health and well being of New Jersey residents may be impaired or destroyed and toward Brownfields areas.

Elsewhere in this October 4, 2004 issue of the New Jersey Register, the Department is proposing to readopt and recodify the Ground Water Quality Standards with limited amendments. See 36 NJR _____. The Department believes that additional amendments to the Ground Water Quality Standards, including new ground water classifications, enhancements to the designated uses, and revisions to the antidegradation policies might be appropriate to promote the principles of Smart Growth. The Department will consider the comments received in response to this notice in determining whether to proceed with additional rulemaking.

A brief discussion of the sections of the GWQS under consideration for future amendment is provided below. Commenters are encouraged to consider recommendations that would support a tiered regulatory approach based on Smart Growth. Since the Ground Water Quality Standards are not self-implementing but are implemented by various programs throughout the Department, commenters should consider how to treat new discharges and existing discharges, and ground water remediation activities.

N.J.A.C. 7:9-6.5 Classification System and Designated Uses: The current rules include three primary classifications. Ground water within watersheds of FW1 surface waters, State-owned Natural Areas, and the major aquifers of the Pinelands Area are designated Class I. Within the Class I classification are two subclassifications, Class I-A and Class I-PL. Class I-A is a non-degradation classification that precludes new and/or expanded discharges as well as activities that would adversely impact ground water quality. Ground water beneath the Pinelands is

classified as Class I –PL. Only activities and discharges consistent the the Pinelands Comprehensive Management Plan can be authorized. The designated use for all Class I ground water is the maintenance of special ecological resources. Secondary uses include potable, agricultural and industrial water. Ground water remediation projects that affect Class I ground water must attain natural background quality which, for many constituents, is non-detectable. Should the Department expand the areas that can be designated as Class I-A to other areas with special ecological resources?

The ground water throughout the majority of the State is classified as Class II, and includes two subclassifications, Class II-A and Class II-B. Class II ground waters have a designated use of the provision of potable water with conventional water supply treatment. The designated use of Class II-A ground water is primarily potable water use at current water quality and the designated use of Class II-B ground water is potable water use subsequent to conventional water supply treatment. Both existing and potential potable water uses are included. Class II criteria specify the levels of constituents above which the water would pose an unacceptable risk for drinking water. Should the highest attainable use be a drinking water supply in all cases? Does the current Class II-A classification provide adequate protection for potable water use? Should the Department create a more protective classification within Class II for wellhead protection areas, source water protection areas, Category 1 watersheds, or areas that support endangered and threatened species?

Currently, the rules include a classification known as Class II-B. This classification was originally intended to apply to ground water associated with remediation projects in areas of the State that are not currently used for public water supply. However, to date no applicant has successfully demonstrated that the contamination from their sites would not adversely affect Class II-A ground water, as required by the rules at existing N.J.A.C. 7:9-6.10. Additionally, the Technical Requirements for Site Remediation at N.J.A.C 7:26E allow for the development of ground water remediation standards that take into account site specific conditions, N.J.A.C. 7:26E-1.13, and enable the Department to evaluate site-specific remediation projects and require appropriate remedial measures. Because the flexibility to address areas where the ground water is not currently a water supply source is provided through the implementation of N.J.A.C. 7:26E

the Department intends to propose to repeal the rules regarding Class II-B in the Ground Water Quality Standards.

Ground water that can not be used for potable water supply due to natural hydrogeologic characteristics or natural water quality is classified as Class III. Class III includes geologic formations or units that are aquitards or have a natural quality that is unsuitable for conversion to potable water (for example, saline ground water). Class III-A is assigned to aquitards and other geologic units with natural quality unsuitable for potable water use. Class III-B is assigned to ground water where the levels of Total Dissolved Solids (TDS) and/or chlorides preclude potable water use with only conventional treatment. However, current technology allows for potable water use with reverse osmosis treatment for ground water with high TDS and/or chlorides. The Department on a case-by-case basis determines the applicant's eligibility for Class III-A and Class III-B. The Appendix - Table 1 ground water quality criteria for most constituents are applied to ground waters in Class III-A and Class III-B. Are there other waters that might also appropriately be designated as Class III? Are the criteria listed in Appendix - Table 1 the appropriate criteria for ground waters designated as Class III? What designated uses should be established for ground waters designated as Class III?

N.J.A.C. 7:9-6.8 Antidegradation Policy: The Ground Water Quality Standards establish two Antidegradation tiers. Class I is essentially a non-degradation category. In Class I-A areas, the Department cannot approve discharges to ground water or activities that result in degradation of natural ground water quality (see existing N.J.A.C. 7:9-6.8(a) and proposed N.J.A.C. 7:9C-1.8(a)). Class I applies only in State-owned Natural Areas and the watersheds of FW1 surface waters. In accordance with the Surface Water Quality Standards at N.J.A.C. 7:9B, FW1 waters are high quality waters required to be maintained in their natural state because of their exceptional qualities. In Class I-PL, limited development can be authorized under the Comprehensive Pinelands Management Plan. Ground water contamination discovered in Class I-A and Class I-PL ground water requires remediation to restore the ground water to its natural quality.

In Class II, the current antidegradation policy allows a new or expanded discharge to degrade ground water quality equal to 50% of the value between current water quality and the ground water quality criteria. For example, if the current water quality level for constituent X is 2 ppm and the ground water quality criterion for constituent X is 10 ppm, a new discharge to ground water would be allowed to change the ground water quality level for constituent X to 6 ppm. Unlike the antidegradation policies that apply under the Surface Water Quality Standards at N.J.A.C. 7:9B-1.5(d), the applicant for a ground water discharge permit is not required to demonstrate that a lowering in ground water quality is necessary to accommodate important social and economic development, conduct an alternatives analysis or demonstrate that the best available treatment technology is being used.

Site remediation projects in Class II areas are required to design treatment to achieve ground water quality standards. In accordance with the Technical rules (see N.J.A.C. 7:26E), source removal with active ground water treatment and/or natural attenuation can be selected as the appropriate remedial measure to attain ground water quality standards. Since ground water remediation is designed to improve ground water quality an antidegradation review is not required. However, in those cases where the remediation results in a discharge to ground water outside of the area of contamination should the Department require the remediator to use best available treatment technology rather than conduct an antidegradation review? Should different antidegradation requirements apply for projects that could impact on wellhead protection area or a source water protection area?

New discharges from wastewater treatment facilities which discharge to ground water via subsurface disposal, spray irrigation, infiltration/percolation lagoons, etc. impact the shallow ground water usually the top 20 feet. Potable water wells are typically installed into the deeper aquifers at 100 to 300 feet. Applicants for ground water discharge permits can either treat the wastewater to meet the antidegradation standards at the point of discharge or demonstrate that the GWQS will be met at the property boundary using a dilution model. Background water quality used in determining effluent requirements is highly variable and greatly affected by surrounding land use. Complex antidegradation evaluations must incorporate vertical and horizontal effects. The Department believes that the current rules do not ensure adequate

protection in some situations, and may be overly protective in other situations. Should the Department take the State Plan into consideration to determine where new discharges to ground water should be approved? Should the Department require new discharges to use best available treatment technology or meet the Class II ground water quality standards at the point of discharge rather than conducting an antidegradation review?

N.J.A.C. 7:9-6.10 Procedures for the reclassification of Ground Water: The Department has established the information needed to support a request that the Department reclassify a groundwater area to higher or lower designated uses. As indicated above, applicants have not been able to make the demonstration required under this rule to reclassify a Class IIA to a Class IIB. The Department anticipates proposing to repeal this classification. Instead of repealing it, however, should the Department instead require different and/or additional information to support a reclassification?

Public Comment

Written comments regarding the topics listed above may be submitted until December 3, 2004 to:

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The Department recommends that commenters submit comments on disk or CD as well as paper. The Department prefers Microsoft Word 6.0 or above. MacintoshTM formats should not be used.

Date

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